

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 5, 7, 8, 13, and 15-20 are pending in this application.

In the outstanding Office Action, Claims 5, 7, 13 and 15 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. patent 6,791,607 to Bilhan et al. (herein "Bilhan"); and Claims 8 and 16-20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bilhan in view of U.S. patent 5,659,355 to Barron et al. (herein "Barron").

Initially, applicants note each of independent claims 5, 7, 13 and 15 is amended by the present response to further distinguish the claims over the cited references. Further, the presently submitted amendments to claims 5 and 13 do not include any new matter that would preclude entry of the present amendment.

Further, Applicants and Applicants' representatives thank Examiner Tran for the courtesy of the interview conducted on August 17, 2006. During the interview, differences between the inventions of the rejected independent claims and the applied reference were discussed. Further, claim amendments to clarify the claimed features were also discussed. The present response sets forth the discussed claim amendments and the following remarks set forth the discussed differences.

Addressing now the above-noted rejections, those rejections are traversed by the present response.

Claim 5 recites, in part,

black shading correcting means for correcting the image signal using a black reference level, said black reference level being obtained from said portion of said photoelectrically converting means for each line during an operation of the reading of the original image,

wherein the black reference level used by said black shading correcting means for each line is obtained using black reference values, each of the black reference values being data of said portion of said photoelectrically converting means for a respective one of a plurality of lines,

wherein the black reference level is a moving average of averages of the black reference values for the plurality of lines,

wherein each black reference value for a respective line is an average of pixel values in a main scan direction, the moving average being obtained from moving-averaging, in a sub-scan direction, the black reference values.

Claim 13 recites similar features and Claims 7 and 15 include the similar limitation that “the black reference level for each line is obtained from moving-averaging the averages of black reference values for the plurality of lines.”

Bilhan describes an image processing apparatus in which the user can program the number of optical black cells per line and the number of lines to be averaged by calibration logic.¹ Further, Bilhan describes scanning of the CCD sensor by horizontal and vertical scanning method.² However, Bilhan does not describe or suggest a “the black reference level is a moving average of averages of the black reference values for the plurality of lines,” as is recited in Claim 1 and shown in a non-limiting example in Figure 5.

In other words, Bilhan describes that at the beginning of each particular line a moving average is taken in a main scan direction. For example, in col. 5, lines 29-31, Bilhan describes that a differential value obtained by the comparator 714 is stored in the register 726, and is forwarded to the DAC. However, there is no disclosure that the differential values of a plurality of lines are stored in the register and a moving average is taken of these differential values. Thus, as discussed in the interview Bilhan does not describe or suggest the black reference level is a moving average of averages of the black reference values for the plurality of lines.

Thereby, the independent claims as currently amended are believed to clearly distinguish over Bilhan.

¹ Bilhan, col. 5, lines 48-50.

² Bilhan, col. 5, lines 43-45.

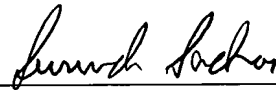
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Moreover, no teachings in Barron were cited with respect to the above-noted features or are believed to overcome the above-noted deficiencies of Bilhan.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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